

AMENDMENTS TO THE CLAIMS

1. **(Cancelled)**
2. **(Currently amended)** The solid reagent of claim ~~1~~35 wherein the organic polymer base is in the form of a fiber, a woven or nonwoven fabric consisting of an assembly of fibers, a porous membrane or a hollow fiber membrane.
3. **(Currently amended)** The solid reagent of claim ~~1~~35 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.
4. **(Currently amended)** The solid reagent of claim ~~1~~35 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.
5. **(Cancelled)**
6. **(Currently amended)** A process for preparing a solid reagent of claim ~~1~~35, comprising:
 - graft-polymerizing a ~~polymerizable monomer~~chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;
 - introducing ~~an~~a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group;
 - and
 - converting the quaternary ammonia-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

7-11. **(Cancelled)**

12. **(Previously presented)** The solid reagent of claim 2 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.

13. **(Previously presented)** The solid reagent of claim 2 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

14. **(Previously presented)** The solid reagent of claim 3 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

15-17. **(Cancelled)**

18. **(Currently amended)** A process for preparing a solid reagent of claim 2, comprising:

graft-polymerizing ~~a polymerizable monomer~~ chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing ~~an~~ a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

converting the quaternary ammonia-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

19. **(Currently amended)** A process for preparing a solid reagent of claim 3, comprising:

graft-polymerizing ~~a polymerizable monomer~~ chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing ~~an~~ a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

converting the quaternary ammonia-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

20. **(Currently amended)** A process for preparing a solid reagent of claim 4, comprising:

graft-polymerizing a ~~polymerizable monomer~~ chloromethylstyrene onto the backbone of an organic polymer base to form a graft polymer side chain;

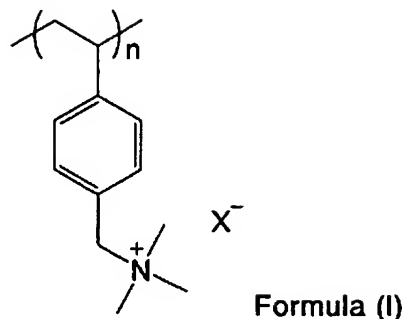
introducing ~~an~~ a quaternary ammonia-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

converting the quaternary ammonia-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

21. **(Previously presented)** The process of claim 6 wherein the graft polymerization is conducted via a radiation-induced graft polymerization.

22-34. **(Cancelled)**

35. **(New)** A solid reagent comprising an organic polymer base in which a graft polymer side chain is introduced onto the backbone of the organic polymer base, wherein the graft polymer side chain has a formula (I):

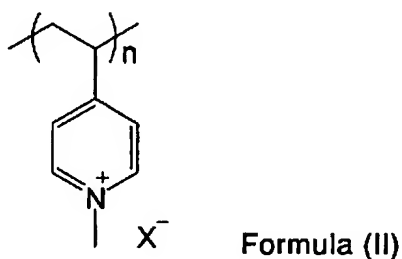


wherein,

n is an integral equal to two or more,

X is a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrate ion.

36. **(New)** A solid reagent comprising an organic polymer base in which a graft polymer side chain is introduced onto the backbone of the organic polymer base, wherein the graft polymer side chain has a formula (II):



wherein,

n is an integral equal to two or more,

X is a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

37. (New) The solid reagent of claim 36 wherein the organic polymer base is in the form of a fiber, a woven or nonwoven fabric consisting of an assembly of fibers, a porous membrane or a hollow fiber membrane.

38. (New) The solid reagent of claim 36 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.

39. (New) The solid reagent of claim 36 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

40. (New) A process for preparing a solid reagent of claim 36, comprising:
graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group:
and

converting the quaternary pyridinium-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

41. (New) The solid reagent of claim 37 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.

42. (New) The solid reagent of claim 37 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

43. (New) The solid reagent of claim 38 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, halogenation reaction or nucleophilic replacement reaction.

44. (New) A process for preparing a solid reagent of claim 37, comprising:
graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group;
and

converting the quaternary pyridinium-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

45. (New) A process for preparing a solid reagent of claim 38, comprising:
graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group;
and

converting the quaternary pyridinium-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

46. (New) A process for preparing a solid reagent of claim 39, comprising:
graft-polymerizing 4-vinylpyridine onto the backbone of an organic polymer base to form a graft polymer side chain;

introducing a quaternary pyridinium-type anion exchange group onto the graft polymer side chain to form a graft polymer side chain having the anion exchange group; and

converting the quaternary pyridinium-type anion exchange group on the graft polymer side chain into a reactive functional group selected from the group consisting of hypochlorite ion, periodate ion, peroxide ion, chromate ion, dichromate ion, perruthenate ion, tetrahydroborate ion, cyanotrihydroborate ion, tribromide ion, cyanide ion, thiocyanate ion, azide ion and nitrite ion.

47. (New) The process of claim 40 wherein the graft polymerization is conducted via a radiation-induced graft polymerization.